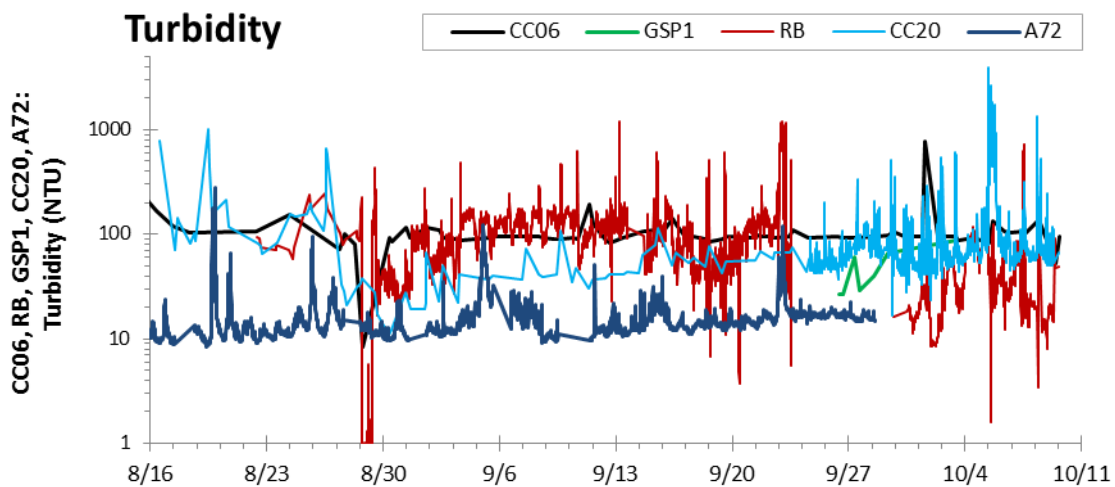
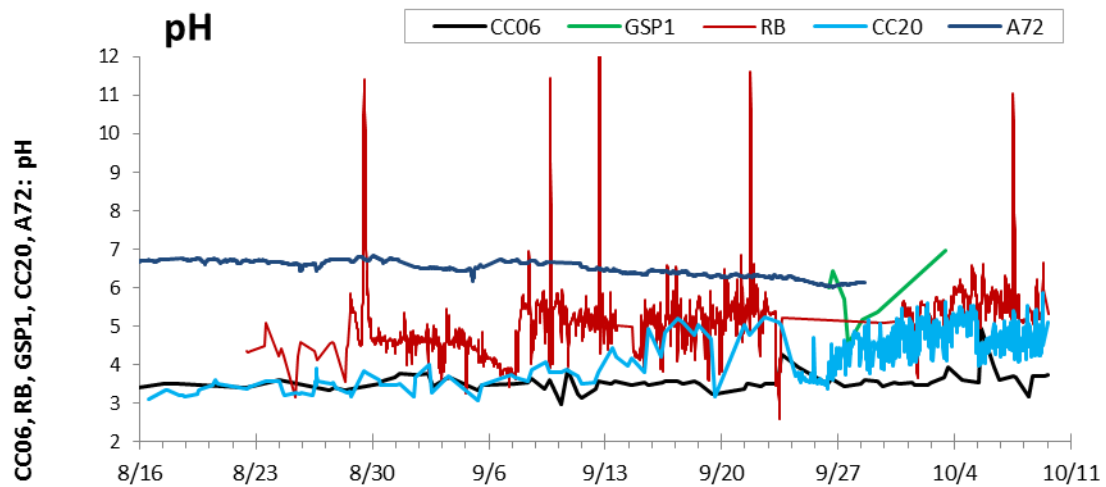
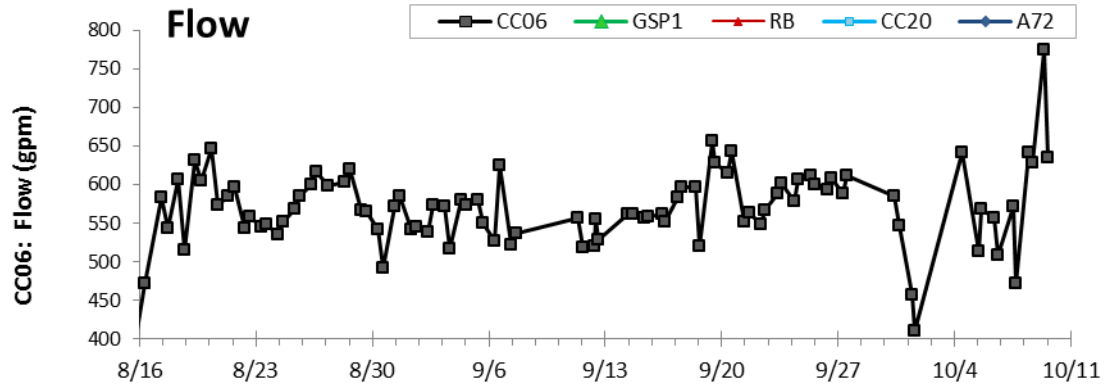
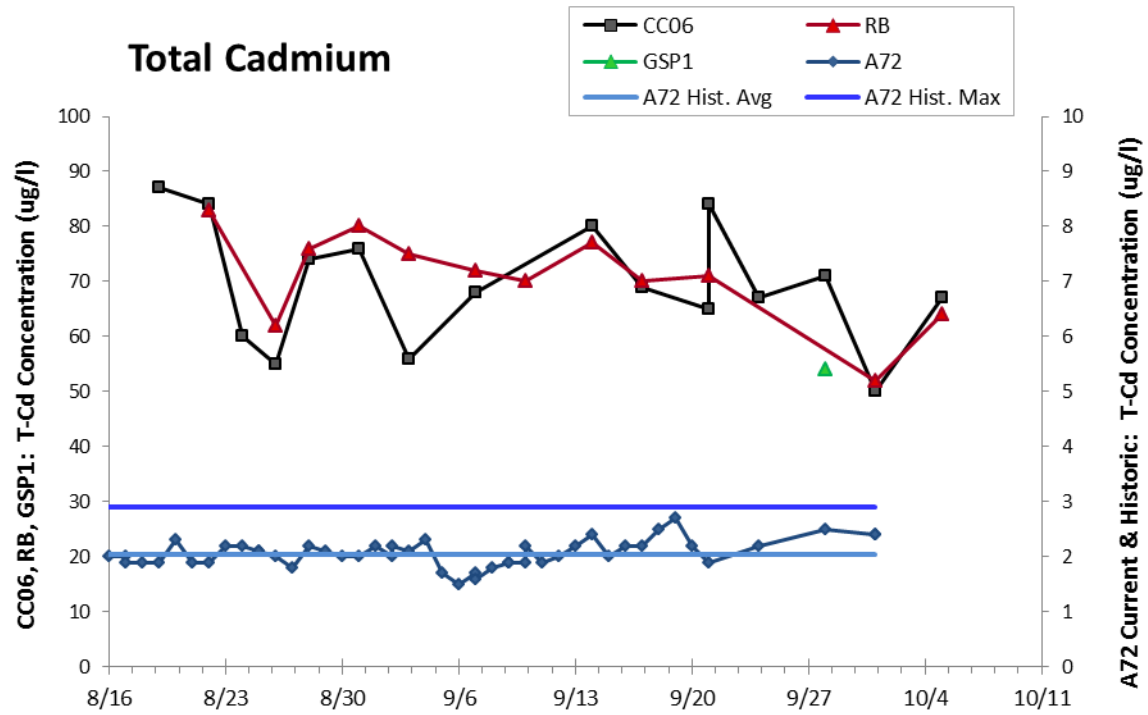
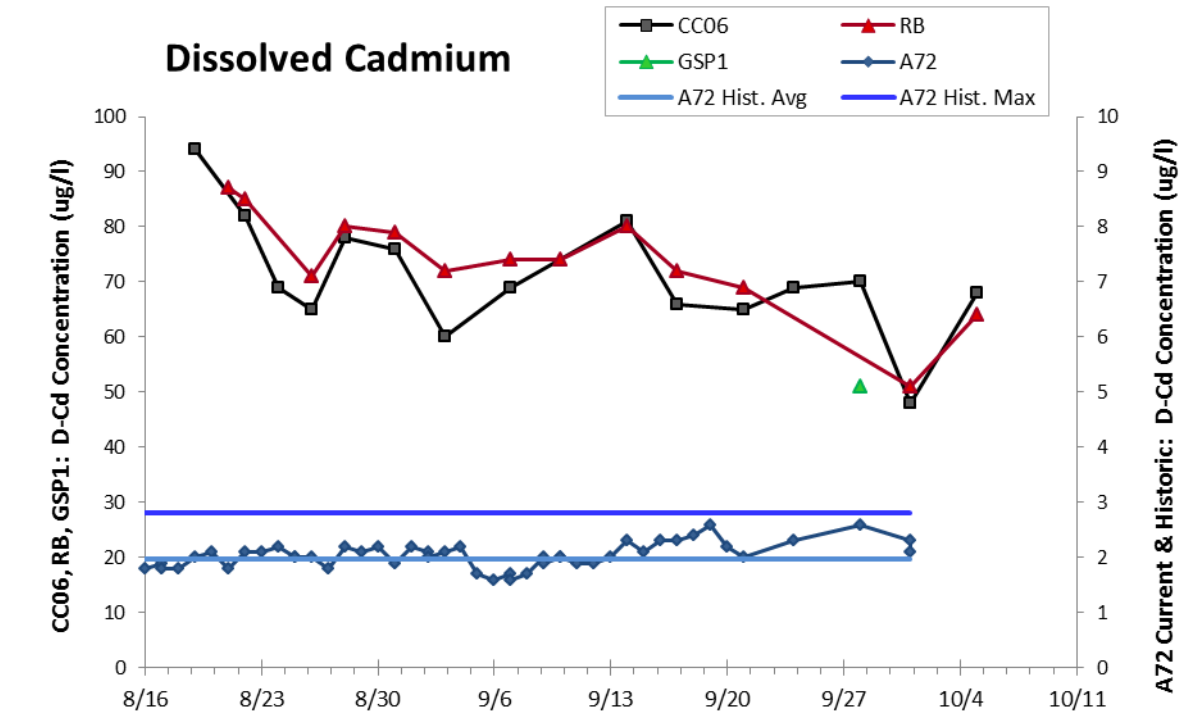


GKM Monitoring and Sampling Data Summary: Created 101015

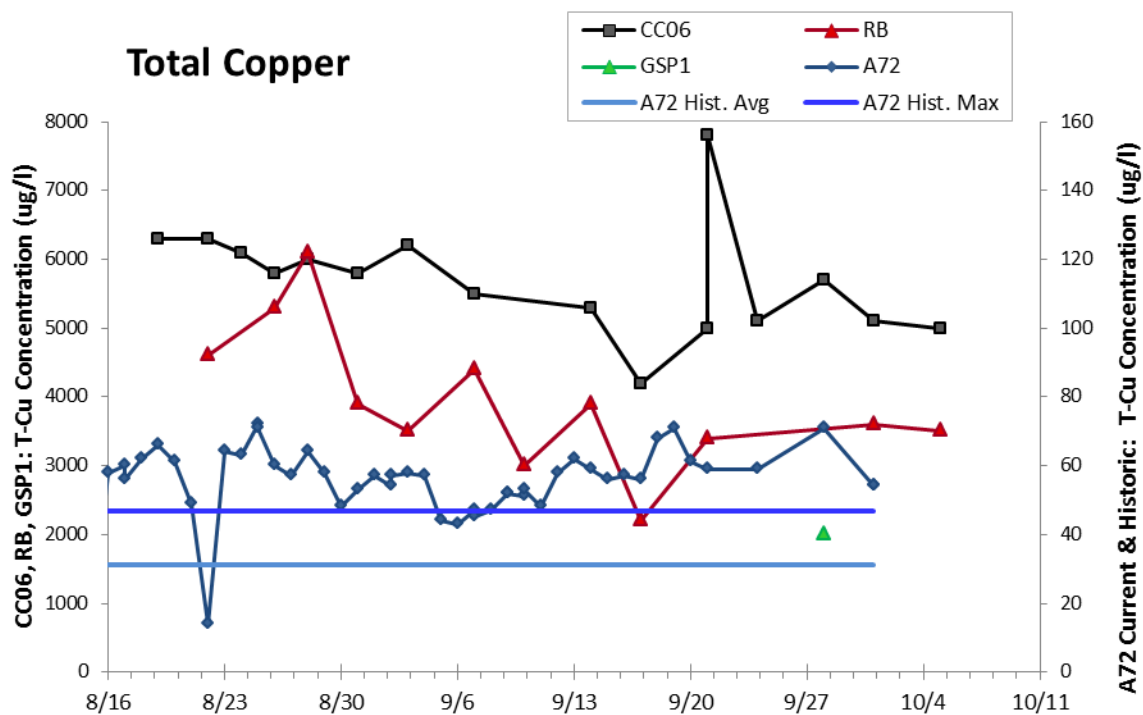
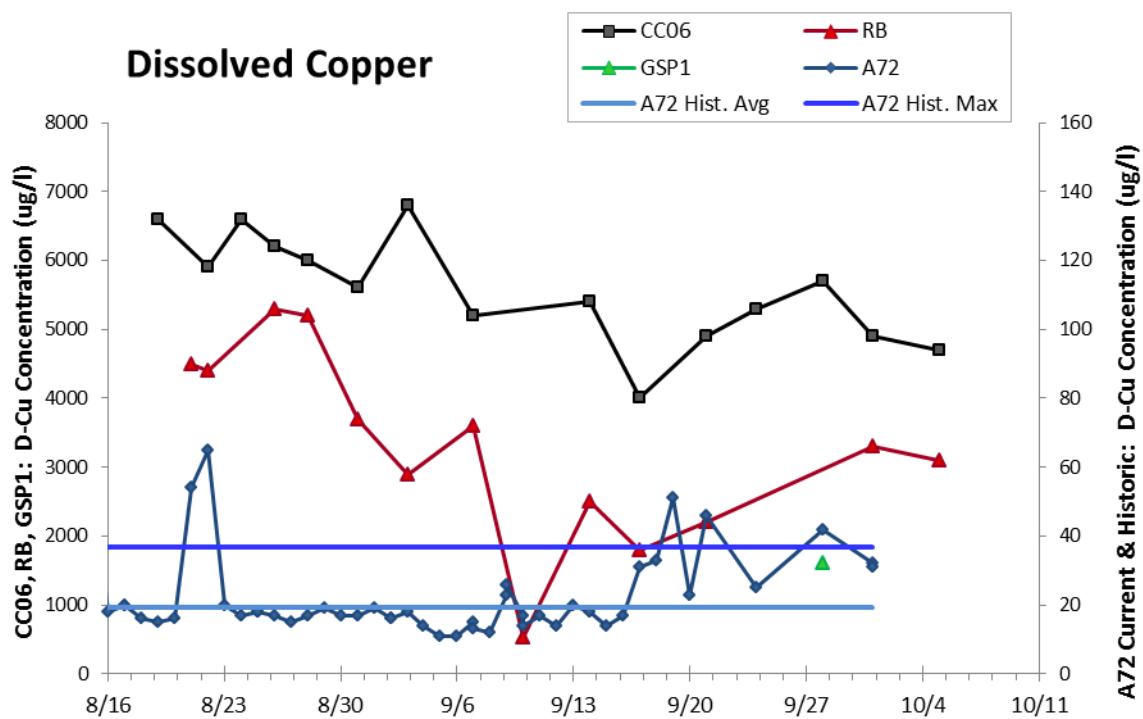
[Monitoring Data through 081615-100915: pH, Turbidity, & Flow](#)



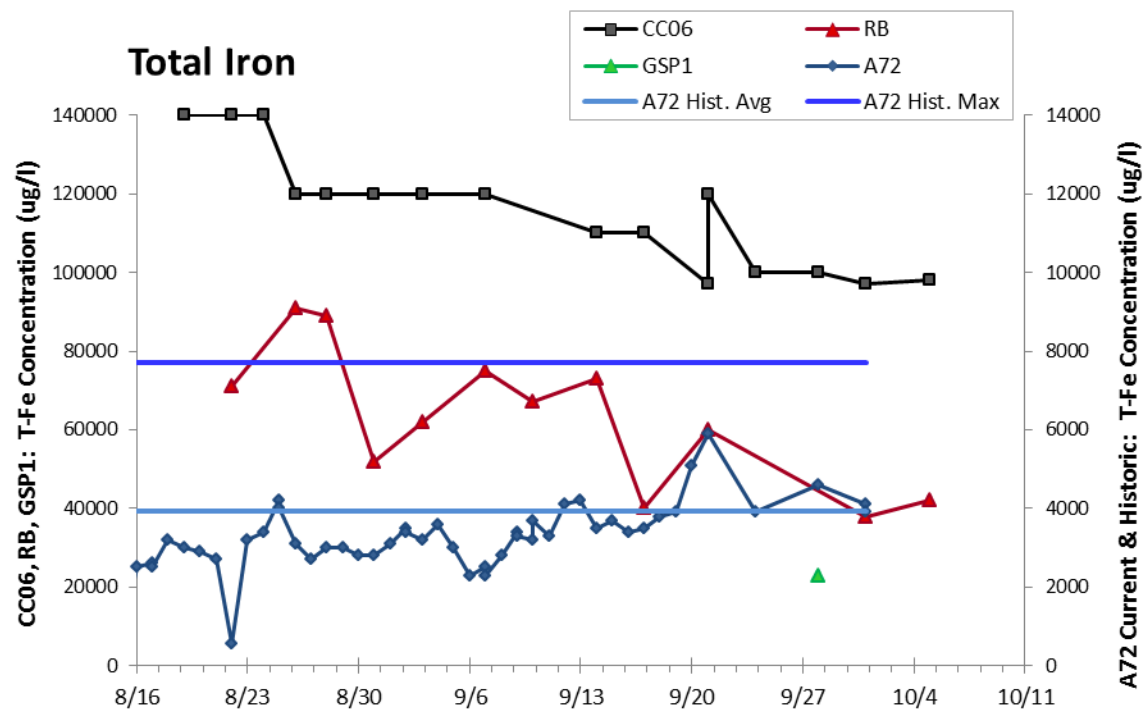
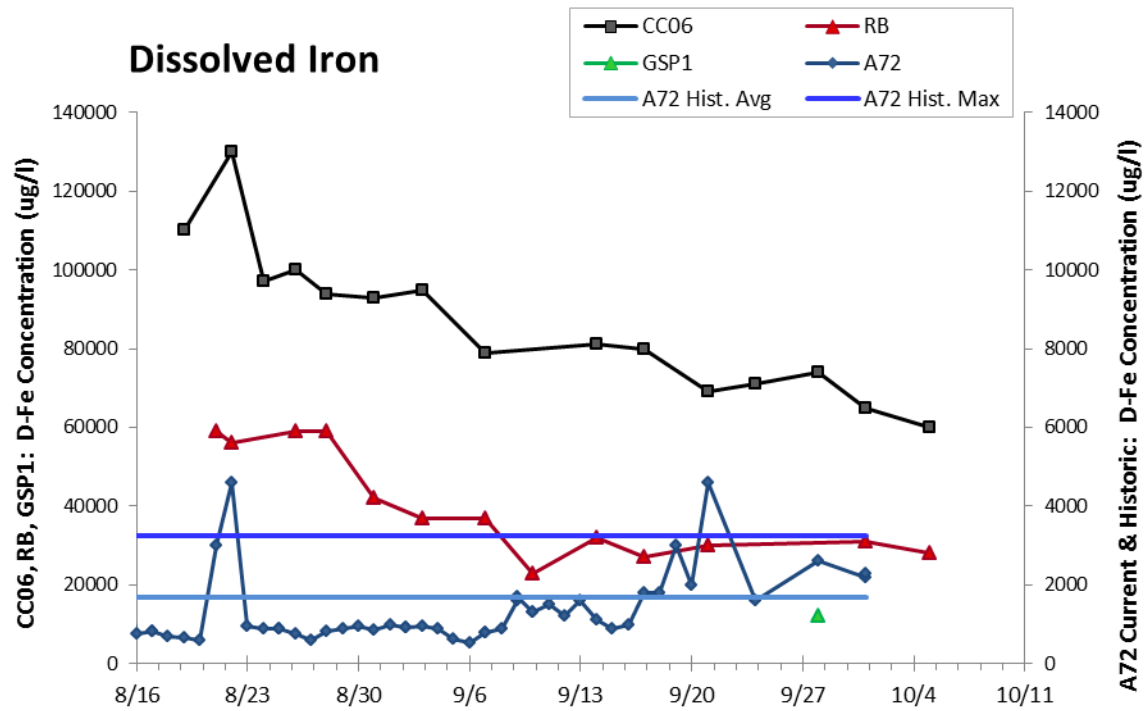
Sampling Data 081615-100515: Cadmium



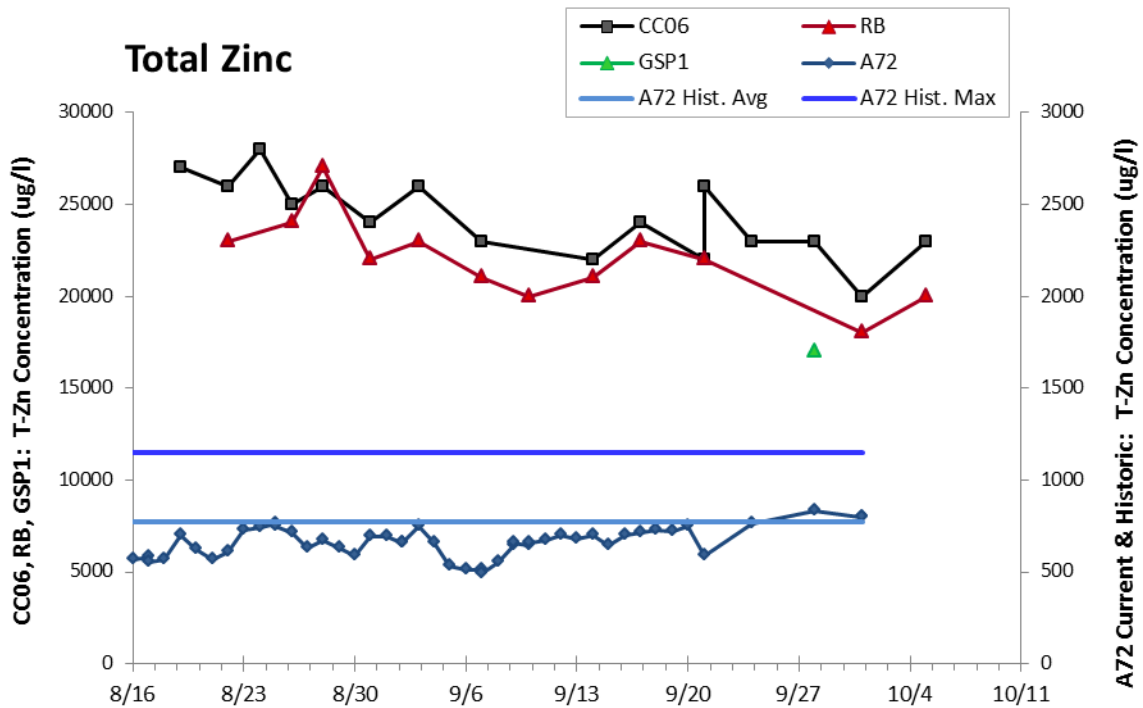
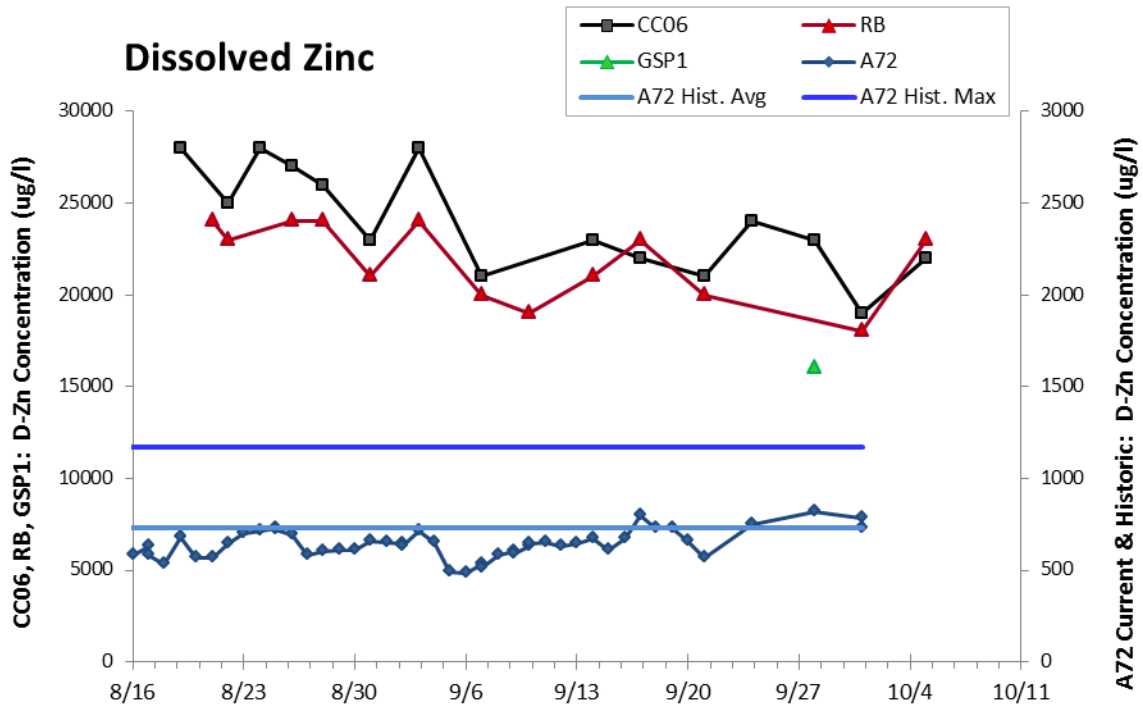
Sampling Data 081615-100515: Copper



Sampling Data 081615-100515: Iron



Sampling Data 081615-100515: Zinc



GKM Water Treatment 100215-101015

Parameter/ Date	Flow from GKM (gal/day)	Flow from GKM (gpm)	Flow to RnB (gpm)	Flow to Bypass or GSP1 (gpm)	Total flow from box (gpm)	Lime rate (lbs/day)	Sodium Hydroxide rate (gal/day)	Floculent type/rate (lbs/day)	pH from GKM	pH into box	pH RB pond effluent	Turbidity RB pond effluent	pH GS pond effluent	Turbidity GS pond effluent	Comments/ Changes
10/2/2015	636,480	442	173	492	665	8lbs/9min. (~1280lbs/day)	25.5 gpd (1L/15min) 00:00-08:00 and 12:30- 14:30	32 oz (vol)/ 15 min 00:00- 08:00 and 12:30-14:30	3.52	3.36	5.13	14	11.80	NA	50% to RB and 50% bypass from 8:00 to 12:30. 50% to RB and 50% GSP1; caustic rate at 25.5 gpd from 12:30 to 14:30. *Note: flow at CC06 lower than recently recorded. Variability in water channel and measuring techniques noted.
10/3/2015	678,960	471.5	266	399	665	8lbs/9min. (~1280lbs/day)	25.5 gpd (1L/15min) 8:30-11:30 intermittent	33 oz (vol)/ 15 min 8:30- 11:30 intermittent	3.81	3.41	4.83	32	22.20	NA	50% to RB and 50% bypass until 8:30. 50% to RB and 50% GSP1; caustic rate at 25.5 gpd from 08:30 to 11:30 while the catchment basin was drained and a flush of the channel was performed. *Note: flow at CC06 lower than recently recorded. Variability in water channel and measuring techniques noted.
10/4/2015	923,040	641	309	356	665	8lbs/9min. (~1280lbs/day)	NA	NA	3.94	3.39	5.22	90	NA	NA	50% to RB and 50% bypass. GSP1 offline to install permanent basin. No construction work, therefore, only one monitoring event was taken. *Note: Measuring line at CC06 reset and channel bottom cleared of large rocks.
10/5/2015	778,320	540.5	333	333	665	8lbs/9min. (~1280lbs/day)	NA	NA	4.25	3.47	4.99	28	13.70	NA	Diversion channel removed and 50% bypass is sent down natural channel. 50% to RB and 50% natural channel. Intermittent rain & snow. RB flow meter malfunctioning since snow. By pass meter has not functioned since the pipe was changed.
10/6/2015	766,800	532.5	333	333	665	8lbs/9min. (~1280lbs/day)	NA	NA	3.79	3.51	5.11	25	37.50	NA	50% to RB and 50% natural channel. Melting snow from previous day. RB flow meter malfunctioning since snow on 10/5.
10/7/2015	750,960	521.5	333	333	665	8lbs/9min. (~1280lbs/day)	NA	NA	3.71	3.43	5.28	80	15.60	NA	Diversion channel removed and 50% bypass is sent down natural channel. 50% to RB and 50% natural channel. Intermittent rain & snow. RB flow meter malfunctioning since snow on 10/5.
10/8/2015	914,400	635	333	333	665	8lbs/9min. (~1280lbs/day)	25.5 gpd (1L/15min) 10:55-12:35	32 oz (vol)/ 15 min 10:55- 12:35	3.45	3.48	5.43	100	11.70	NA	50% to RB and 50% natural channel. Between 10:00 and 12:00 all water was sent to RB. Treatment with caustic and lime at 1Liter per minute conducted at RB from 11:00-12:30. Water at Gold King is now being pumped through pipe into channel rather than gravity flow. This will stay in place until sump pump goes in on Thursday (10/15). RB flow meter malfunctioning since snow on 10/5.
10/9/2015	1,014,480	704.5	434	232	665	8lbs/9min. (~1280lbs/day)	NA	NA	3.73	3.46	5.63	48	49.10	NA	50% to RB and 50% natural channel. Upset with hopper during the night - extra lime delivered. Between 9:00 and 10:00 all water was sent to RB. Flow at RB ponds prior to 15:00 was restricted due to work at mine. Flow meters are malfunctioning - RB has not functioned properly since the snow on Monday (10/5). By pass meter has not functioned since the pipe was changed.
10/10/2015	884,880	614.5	434	232	665	8lbs/9min. (~1280lbs/day)	25.5 gpd (1L/15min) 11:00-16:50	32 oz (vol)/ 15 min 11:00- 16:50	3.75	3.47	5.34	65	82.10	NA	Intent is to send 50% to RB and 50% natural channel to bypass. At 11:20, orange water from GKM, sent all flow to RB. Began caustic/flow treatment. 12:20 water cleared up, went back to 50/50, but no water was coming to RB - went to ~300gpm to RB & ~100gpm to bypass. At 13:30 took sample at bypass & it was back to full flow. Flow meters on previous days were malfunctioning but today's readings appeared on target.

*Note: Bypass meter unreliable starting 9/18/15. Flows estimated by subtracting RnB flow from average total flow from box from measurements taken prior to pipe change.

RB meter has been malfunctioning since snow on 10/5. Bypass meter has been malfunctioning since pipe change. Flows are estimated based on previous readings and information from treatment on flow split.